

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of the Claims:**

1. (Currently Amended) A dielectric material comprising a plurality of single-wall carbon nanotubes coated at least in part with a polymer molecule, wherein the polymer-coated single-wall carbon nanotubes are substantially electrically-isolated from one another.
2. (Cancelled)
3. (Original) A dielectric material in accordance with claim 1, wherein the single-wall carbon nanotubes are smaller on average in their circumference than the average length of the individual polymer molecules.
4. (Original) A structure comprising a dielectric material in accordance with claim 1, wherein the structure is selected from the group consisting of capacitor dielectrics, circuit board materials, waveguide materials, optical index-matching materials, electromagnetic radiation absorbing materials, electromagnetic radiation re-directing materials, optoelectronic materials, antenna arrays, materials for suspending antennas, electrically-loading antennas, and supports of antenna arrays.
5. (Original) A dielectric material in accordance with claim 1, wherein the polymer-coated single-wall carbon nanotubes are embedded in a polymer matrix.
6. (Original) A dielectric material in accordance with claim 5, wherein the polymer matrix is an electrically-insulating polymer material.
7. (Cancelled)
8. (Original) A dielectric material in accordance with claim 1, wherein a dielectric constant of said dielectric material is at least about 10.

9. (Original) A dielectric material in accordance with claim 1, wherein a dielectric constant of said dielectric material is at least about 100.
10. (Original) A dielectric material in accordance with claim 1, wherein a dielectric constant of said dielectric material is at least about 500.
11. (Currently Amended) A dielectric material comprising a plurality of aggregates of single-wall carbon nanotubes, wherein the aggregates are coated at least in part with a polymer molecule and wherein at least some of the plurality of the aggregates of single-wall carbon nanotubes are substantially electrically-isolated from one another.
12. (Currently Amended) A dielectric material in accordance with claim 11, wherein the aggregates of single-wall carbon nanotubes comprise ropes ~~nanotube aggregate comprises a rope~~ of single-wall carbon nanotubes in which the nanotubes are substantially aligned along the their longitudinal axes of the ropes.
13. (Currently Amended) A dielectric material in accordance with claim 11, wherein the aggregates of single-wall carbon nanotubes comprise bundles ~~nanotube aggregate comprises bundle~~ of single-wall carbon nanotubes in which the nanotubes are substantially aligned along the their longitudinal axes of the bundles.
14. (Cancelled)
15. (Original) A dielectric material in accordance with claim 11, wherein the aggregates of single-wall carbon nanotubes are smaller on average in their circumference than the average length of the individual polymer molecules.
16. (Original) A structure comprising a dielectric material in accordance with claim 11, wherein the structure is selected from the group consisting of capacitor dielectrics, circuit board materials, waveguide materials, optical index-matching materials, electromagnetic radiation absorbing materials, electromagnetic radiation re-directing materials, optoelectronic materials, antenna arrays, materials for suspending antennas, electrically-loading antennas, and supports of antenna arrays.

17. (Original) A dielectric material in accordance with claim 11, wherein the polymer-coated aggregates of single-wall carbon nanotubes are embedded in a polymer matrix.
18. (Original) A dielectric material in accordance with claim 17, wherein the polymer matrix is an electrically-insulating polymer material.
19. (Cancelled)
20. (Original) A structure comprising a dielectric material in accordance with claim 17, wherein the structure is selected from the group consisting of capacitor dielectrics, circuit board materials, waveguide materials, optical index-matching materials, electromagnetic radiation absorbing materials, electromagnetic radiation re-directing materials, optoelectronic materials, antenna arrays, materials for suspending antennas, electrically-loading antennas, and supports of antenna arrays.
21. (Original) A dielectric material in accordance with claim 11, wherein a dielectric constant of said dielectric material is at least about 10.
22. (Original) A dielectric material in accordance with claim 11, wherein a dielectric constant of said dielectric material is at least about 100.
23. (Original) A dielectric material in accordance with claim 11, wherein a dielectric constant of said dielectric material is at least about 500.
24. (Original) A composition of matter comprising a plurality of single-wall carbon nanotubes coated at least in part with a polymer molecule wherein the single-wall carbon nanotubes change dimensionally and electronically in response to chemical adsorption on the surface of the nanotube
25. (Original) A structure comprising a composition of matter in accordance with claim 24, wherein the structure is a chemical sensor.
26. (Original) A structure comprising a composition of matter in accordance with claim 24, wherein the structure is a transducer.
27. (Currently Amended) A composition of matter comprising aggregates of single-wall carbon

nanotubes, wherein the aggregates are coated at least in part with a polymer molecule and wherein the single-wall carbon nanotubes change dimensionally, ~~and~~ electronically, or both in response to chemical adsorption on the surface of the nanotubes.

28. (Original) A composition of matter in accordance with claim 27, wherein the single-wall carbon nanotube aggregate comprises a rope of single-wall carbon nanotubes in which the nanotubes are substantially aligned along their longitudinal axes.

29. (Original) A structure comprising a composition of matter in accordance with claim 27, wherein the structure is a chemical sensor.

30. (Original) A structure comprising a composition of matter in accordance with claim 27, wherein the structure is a transducer.

31-34. (Cancelled)

35. (Currently Amended) A fluid comprising a dispersion of a plurality of single-wall carbon nanotubes coated at least in part with a polymer ~~and dispersed in a fluid~~, whereby the viscosity of the fluid is capable of being controlled by application of a field selected from the group consisting of an electric field, a magnetic field and combinations thereof.

36. (Currently Amended) A fluid comprising a dispersion of a plurality of aggregates of single-wall carbon nanotubes, wherein the aggregates are coated at least in part with a polymer and ~~dispersed in a fluid~~, whereby the viscosity of the fluid is capable of being controlled by application of a field selected from the group consisting of an electric field, a magnetic field and combinations thereof.

37. (Original) A fluid in accordance with claim 36, wherein the single-wall carbon nanotube aggregate comprises a rope of single-wall carbon nanotubes in which the nanotubes are substantially aligned along their longitudinal axes.

38. (Original) A fluid in accordance with claim 36, wherein the single-wall carbon nanotube aggregate comprises a bundle of single-wall carbon nanotubes in which the nanotubes are

substantially aligned along their longitudinal axes.

39. (Cancelled)

40. (Currently Amended) A film comprising a plurality of aggregates of single-wall carbon nanotubes, wherein the aggregates are coated at least in part with a polymer.

41. (Original) A film in accordance with claim 40, wherein the single-wall carbon nanotube aggregate comprises a rope of single-wall carbon nanotubes in which the nanotubes are substantially aligned along their longitudinal axes.

42. (Original) A film in accordance with claim 41, wherein the single-wall carbon nanotube aggregate comprises a bundle of single-wall carbon nanotubes in which the nanotubes are substantially aligned along their longitudinal axes.

43. (Cancelled)

44. (Currently Amended) A fiber comprising a plurality of aggregates of single-wall carbon nanotubes, wherein the aggregates are coated at least in part with a polymer.

45. (Original) A fiber in accordance with claim 44, wherein the single-wall carbon nanotube aggregate comprises a rope of single-wall carbon nanotubes in which the nanotubes are substantially aligned along their longitudinal axes.

46. (Original) A fiber in accordance with claim 44, wherein the single-wall carbon nanotube aggregate comprises a bundle of single-wall carbon nanotubes in which the nanotubes are substantially aligned along their longitudinal axes.

47-50. (Cancelled)

51. (New) A composition of matter comprising a plurality of single-wall carbon nanotubes coated at least in part with a polymer molecule wherein the composition changes dimensionally, electronically, or both in response to an applied electric field.

52. (New) A structure comprising a composition of matter in accordance with claim 51, wherein the structure is a transducer.

53. (New) A composition of matter comprising a plurality of single-wall carbon nanotubes coated at least in part with a polymer molecule wherein the composition changes dimensionally, electronically, or both in response to an applied magnetic field.

54. (New) A structure comprising a composition of matter in accordance with claim 53, wherein the structure is a transducer.

55. (New) A composition of matter comprising a plurality of single-wall carbon nanotubes coated at least in part with a polymer molecule wherein the composition changes dimensionally, electronically, or both in response to chemical adsorption on the surface of the nanotubes.

56. (New) A structure comprising a composition of matter in accordance with claim 55, wherein the structure is a chemical sensor.

57. (New) A structure comprising a composition of matter in accordance with claim 55, wherein the structure is a transducer.

58. (New) A composition of matter comprising aggregates of single-wall carbon nanotubes, wherein the aggregates are coated at least in part with a polymer molecule and wherein the composition changes dimensionally, electronically, or both in response to chemical adsorption on the surface of the nanotubes.

59. (New) A composition of matter in accordance with claim 58, wherein the aggregates of single-wall carbon nanotubes comprise ropes of single-wall carbon nanotubes in which the nanotubes are substantially aligned along the longitudinal axes of the ropes.

60. (New) A structure comprising a composition of matter in accordance with claim 58, wherein the structure is a chemical sensor.

61. (New) A structure comprising a composition of matter in accordance with claim 58, wherein the structure is a transducer.

62. (New) A composition of matter comprising aggregates of single-wall carbon nanotubes, wherein the aggregates are coated at least in part with a polymer molecule and wherein the composition changes dimensionally, electronically, or both in response to an applied electric field.

63. (New) A composition of matter in accordance with claim 62, wherein the aggregates of single-wall carbon nanotubes comprise ropes of single-wall carbon nanotubes in which the nanotubes are substantially aligned along the longitudinal axes of the ropes.

64. (New) A structure comprising a composition of matter in accordance with claim 62, wherein the structure is a transducer.

65. (New) A composition of matter comprising aggregates of single-wall carbon nanotubes, wherein the aggregates are coated at least in part with a polymer molecule and wherein the composition changes dimensionally, electronically, or both in response to an applied magnetic field.

66. (New) A composition of matter in accordance with claim 65, wherein the aggregates of single-wall carbon nanotubes comprise ropes of single-wall carbon nanotubes in which the nanotubes are substantially aligned along the longitudinal axes of the ropes.

67. (New) A structure comprising a composition of matter in accordance with claim 65, wherein the structure is a transducer.